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DEPARTMENT OF THE ARMY
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WASHINGTON, D.C. 20310

(1)

IN REPLY REFER TO

AGAM-P (M) (29 Sep 67) FOR OT RD-670324

4 October 1967

SUBJECT: Operational Report - Lessons Learned, Headquarters,
3d Field Hospital

TO: SEE DISTRIBUTION

1. Subject report is forwarded for review and evaluation by USACDC in accordance with paragraph 6f, AR 1-19 and by USCONARC in accordance with paragraph 6c and d, AR 1-19. Evaluations and corrective actions should be reported to ACSFOR OT within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure appropriate benefits in the future from Lessons Learned during current operations, and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

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FOR OT RD
670324

DEPARTMENT OF THE ARMY
HEADQUARTERS 3D FIELD HOSPITAL
APO 96307

AVCA MB-GD-FA

8 May 1967

SUBJECT: Operational Report - Lessons Learned for Quarterly Period
Ending 30 April 1967 (RCS CSFOR - 65)

THRU: Commanding Officer
68th Medical Group
ATTN: AVCA-GO-PO
APO 96491

TO: Assistant Chief of Staff for Force Development
Department of the Army
Washington, D.C. 20310

The OPERATIONAL REPORT - LESSONS LEARNED of this headquarters
for the quarterly period ending 30 April 1967 is forwarded in accordance
with Army Regulation 1-19 and LC 870-3.

2 Incl

D. F. Morss
D. F. MORSS
LTC, MC
Commanding

FOR OT RD
670324

AVCA MB-GD-FA

8 May 1967
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SUBJECT: Operational Report - Lessons Learned for Quarterly Period Ending
30 April 1967 (RCS CSFOR - 65)

A. During this report period, the 327 bed 3d Field Hospital accomplished its assigned mission of providing the best care for all classes of patients. Specifically, the hospital provided direct support to units in the III and IV Corps, and general support to units in II Corps. LTC Dwight F. Morss, MC, replaced LTC Joseph E. Molloy as the Commanding Officer of the 3d Field Hospital on 1 February 1967.

B. In April, the Lynx Switchboard, which formerly occupied a portion of the hospital headquarters building, was moved to another location. This vacated room was made available to the Registrar Division, and the former area was occupied by the Personnel Section and Adjutant's Office.

C. The Annual General Inspection of the 3d Field Hospital was conducted on 25 - 26 April 1967, by the Inspector General, 1st Logistical Command. A rating of satisfactory was awarded. Only ratings of satisfactory or unsatisfactory are awarded. Results of this inspection indicated significant improvement over the FY 66 Annual General Inspection.

D. The 3d Field Hospital was presented the Meritorious Unit Commendation on 23 March 1967, by MG Charles W. Eifler, Commanding General of 1st Logistical Command. The Commendation was awarded on 9 November 1966, for exceptionally meritorious conduct in the performance of outstanding services during the period May 1965, to November 1965.

E. During this period, two meetings were held at the hospital to discuss hospital construction problems. Representatives from RIOCC, RMK-BRJ, USA HAC Engineers, PA&L, and the hospital staff, reviewed progress of the current construction program. As a result of these meetings, many problems were resolved and work is being expedited on the following projects:

1. New surgical building
2. Air conditioning of Ward #1.
3. Sewage disposal system
4. Elevators to serve Wards 8 & 9

F. Personnel: There is an acute shortage of Nursing Service enlisted personnel, and the hospital patient census remains at a high level. There has been a high incidence of illness in the enlisted ranks, coincident with the shortage.

G. Plans and Operations: The hospital received USARV top priority for future construction of a 10,000 square foot supply and service building, a new mess facility, a specialty clinic building, and a new 45 bed surgical ward.

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H. Supply and Service: Supply and Service Division stressed materiel readiness during this quarter. All attached 8-500 TOE Teams were checked, utilizing the following materiel readiness check list as a guide:

1. Vehicle TI and equipment check
2. TOE equipment PM check
3. Clothing and equipment check TA 50-913
4. Weapons TI and PM
5. Basic load of ammunition
6. Basic load of rations
7. Miscellaneous expendable and housekeeping items
8. Instruction on .45 caliber and M-14 rifle
9. Weapons loading plan
10. PLL

I. Nursing Service: Nursing Service received several items of equipment, including eight (8) Bennett respirators, one (1) thermal blanket and bed side screens, and twelve (12) standard hospital beds.

J. Registrar: As a result of a change in policy that permits outpatient treatment of United States civilians and authorized third country nationals, the outpatient work load has increased substantially. The actual increase was 309 percent, with 176 visits this quarter, as compared to 43 visits the previous quarter. Consequently, the increase in outpatient visits increases our Medical Services Account.

K. Surgery: The mission of the Surgery Department has been altered somewhat by the recent change in the dust-off evacuation policy. Only in times of very heavy casualties and large surgical back-logs in other hospitals, does the 3d Field Hospital receive direct casualties from outside Saigon. The remainder of the time, we receive seriously ill patients as transfers from other hospitals, patients from CSF who are not ready for evacuation, and direct casualties from the immediate Saigon Area.

L. Radiology Service: On 10 April 1967, the 915th Medical Detachment (KH-X-Ray), which had been augmenting the radiology section of the 3d Field Hospital, was placed on TDY to another unit in Vietnam. The radiographic

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and fluoroscopic (100 Ma, 100 PKV) equipment, belonging to the 915th Medical Detachment, had been installed in the Radiology Service of the 3d Field Hospital and was serving as the only fluoroscopic apparatus available to this hospital. Because this machine has only limited mobility and was deemed undesirable in the field for the 915th Medical Detachment, an exchange of property was made, with 3d Field Hospital receiving the 915th stationary machine and in-turn transferring a field X-Ray apparatus to the 915th Medical Detachment.

M. Radiology Service: During the quarter, the routine work load in the radiology service increased to an average of 1500 patients examined per month and the number of fluoroscopic examinations more than doubled to between 70 and 100 per month. This increase is probably parallel with the increase in outpatient visits.

N. 104th Medical Detachment: The 104th Medical Detachment, KD Team, commanded by Major Adams, a maxillo-facial surgeon, was reassigned to the 24th Evacuation Hospital on 1 April 1967.

O. Dental Unit: The Dental Clinic is now furnishing dental treatment to hospital patients and staff, oral surgery consultation and treatment for the Saigon area, including Vietnamese and American civilians (emergency care only). Dental MEDCAP is also a major effort in our treatment facility.

P. Laboratory: The 406th Mobile Medical Laboratory continued to supply direct laboratory and blood bank support for the 3d Field Hospital. The acquisition of three (3) additional 65 cubic feet refrigerators allowed a physical separation of the central blood bank and clinical laboratory.

Q. Pharmacy: During this quarter, the Pharmacy Service experienced a 50% increase in the number of prescriptions filled. Again, this increase is attributed to the increase in outpatient visits.

R. Operating Room: The Operating Room supervisor has put into effect several procedures to decrease excessive traffic through the operating room and to improve aseptic techniques in the operating room.

S. For Surgery activities refer to Annex A.

T. For Medicine activities refer to Annex B.

U. For Renal Unit activities refer to Annex C.

SECTION II PART IOBSERVATIONS (LESSONS LEARNED)5 A. EVACUATION:ITEM: Air Evacuation

DISCUSSION: Patients requiring more definitive treatment are sent to the 21st CSF at Tan Son Nhut Air Force Base for further evacuation to hospitals in Japan or the United States. Patients are usually kept at the holding facility for short periods of time until evacuation aircraft are available.

OBSERVATION: Patients have been sent to our hospital from the 21st CSF for further treatment to stabilize their conditions until they can be safely evacuated. Significant temperature elevations, fluid in the chest, sub-phrenic collections, and infected wounds have been noted frequently. Some hospitals evacuate patients to CSF before they are stabilized.

B. PATIENT WOUNDS:ITEM: Battle Wounds

DISCUSSION: Some battle wounds are left open and some are closed, depending on the severity, area of the wound, and judgement of the physician.

OBSERVATION: Patients have been transferred to this hospital with extremity wounds which were closed primarily, and subsequently became infected. Primary closure of battle casualty wounds in areas other than head, neck, and hand has been discouraged for some time by experienced trauma surgeons.

C. MEDCAP:ITEM: MEDCAP

DISCUSSION: The 3d Field Hospital sponsors MEDCAP trips to 6 Vietnamese villages in the Saigon area twice a week. Doctors, nurses, and corpsmen give primarily, first-aid treatment to the Vietnamese.

OBSERVATION: MEDCAP activities have consumed much of the time of our professional medical personnel. The medical problems confronted and treatment given could be handled by people of lesser training (e.g. nurses, corpsmen) since much of it is first-aid and symptomatic treatment.

D. PROSTHETICS:ITEM: Dentures

DISCUSSION: Improper disposition of dentures belonging to wounded personnel is a serious problem that has caused considerable inconveniences and hardships for the patients.

OBSERVATION: Dentures are often thrown away or misplaced by individuals administering first-aid in the field, thus producing unnecessary delay in the treatment of the patient. What may seem unserviceable to a non-professional person might be a case of easy repair to a trained individual.

E. BURN PATIENTS:

ITEM: Evacuation of Burn Patients

DISCUSSION: Evacuation by air of burn patients before they are stabilized often complicates their condition.

OBSERVATION: A burn center should be established at the 3d Field Hospital for the following reasons:

1. Medical personnel at the 106th General Hospital in Japan feel that we should keep all burn patients until the diuretic phase is completed. Until this phase is over, the stability of severely burned patients (30% 3d degree and above) is questionable.
2. The 106th General Hospital is getting excellent results with 0.5 silver nitrate treatment which could be used at the 3d Field Hospital.
3. The air is very dry in the aircraft, and it is difficult to keep enough moisture in the trachea to keep the secretions liquified.
4. It is difficult to hear well enough to take a blood pressure reading on the plane while in the air.
5. At times, hematocrits and electrolytes became important during the time it takes to deliver the patient to 106th General Hospital.
6. The 3d Field Hospital has a renal team with a dialysis machine, if renal shut-down should occur. The 106th General Hospital does not have a dialysis machine, but must rely upon a renal team at another hospital.
7. The cost of a special plane to take one to three patients to Japan is considerable.

F. BLANKETS:

ITEM: Patient Blankets for Air Evacuation

DISCUSSION: All patients that are air evacuated out of Vietnam must have a cover or blanket.

OBSERVATION: A shortage of wool OD blankets for air evacuation of patients caused a problem in linen exchange. Blankets are not exchanged with the Air Force on air evacuations, but are transferred with patients to the out-of-country hospitals. Disposable type blankets should be used in preference to the more expensive and hard to obtain wool blankets.

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G. PHONE CALLS:

ITEM: Patients Calling Home

DISCUSSION: Patients desiring to notify their next of kin of their conditions often experience lengthy delays in placing their calls through the overseas operator.

OBSERVATION: Many patients who wish to call home to reassure the family that they are not seriously ill or injured, do not qualify to call on an emergency basis. It is therefore difficult to call their families and many days may pass before it is possible to complete a call.

SECTION II PART II

RECOMMENDATIONS

A. AIR EVACUATION: Seriously ill patients, especially peripheral vascular cases, should be retained in a hospital and not transferred to CSF for air evacuation until stable because serious complications can frequently be averted by close control.

B. WOUNDS: Wounds of arms, legs and torso should be debrided and left open and a delayed primary closure should be done in 4-7 days.

C. MEDCAP: Professional medical personnel should provide greater benefits by teaching in local civilian hospitals and medical schools rather than spending the same amount of time in giving first aid to local nationals.

D. PROSTHETICS: The proper handling of prosthetic appliances in the field can reduce and simplify the treatment of dental patients.

E. BURN PATIENTS: The 3d Field Hospital should retain burn patients until the diuretic phase is completed.

F. AIR EVACUATION BLANKETS: Disposable paper blankets should be used for air evacuation so that 3d Field Hospital's wool blankets will not be lost during the transfer.

G. PATIENT CALLING HOME: Wounded patient's calls should be made through the MARS Station at Tan Son Nhut as priority calls in which case the MARS Station calls the ward when contact is made with the United States.

ANNEXES

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ANNEX A

SURGERY

1. SURGERY: It was very stimulating to have Colonel Whelan (Surgical Consultant to USARPAC Surgeon) visit us and participate in rounds and conferences. His suggestions and teaching were appreciated a great deal by all the surgeons. LTC Gomez, LTC Miller, and LTC Bravo have made surgery rounds with us several times and it has been most valuable to have these knowledgeable men assisting and teaching our surgeons.

2. PLASTIC SURGERY: Dr. Robert McCormack, Rochester, New York; Dr. Richard Stark, New York, New York; and Dr. Michael Lewin; all prominent plastic surgeons, visited our facility during March and April. These surgeons all volunteered to work three weeks at Cho Ray and Cong Hoa hospitals, and as a result have helped develop closer relationships between the US and Vietnamese hospitals. A similar relationship resulted from LTC Bravo's efforts in the Cong Hoa surgical residency program; residents from Long Hoa attend surgical rounds at our hospital on Friday afternoon. Plans had been made to provide some observer training to these residents, but due to a decrease in their resident staff this has not become possible yet. Members of our staff continue to provide lectures and teaching to the Medical School and Cong Hoa Hospital.

3. ORTHOPEDIC SURGERY: Under the guidance of Major William Zwilling, the orthopedic surgeons have enlarged their activities significantly. They now have improved clinic and cast room facilities with three cast men. During the month of March 1967, 280 consultations were seen in the orthopedic clinic, 315 patients were attended in the cast room, and 106 operative procedures were performed in the operating room. Of the 106 procedures, 71 were major cases and 35 were minor cases. 87 inpatients were cared for, including combatant and non-combatant injuries. CPT McGirt, a partially trained orthopedic surgeon, is assisting MAJ Zwilling.

4. NEUROSURGERY: During this past quarter, we have had as many as four neurosurgeons on duty here. Since the opening of the 24th Evacuation Hospital for neurosurgery, all neurosurgeons except CPT Taniguchi have been transferred to the 24th Evacuation Hospital. He is remaining here to care for the neurosurgical patients injured in the Saigon area.

5. HOSPITAL ADMISSIONS TO SURGERY SERVICE:

<u>Month</u>	<u>Admissions</u>	<u>IRHA</u>	<u>Major Operations</u>	<u>Minor Operations</u>
February	419	314	224	66
March	440	204	270	48
April	<u>585</u>	<u>170</u>	<u>192</u>	<u>69</u>
Total	1,444	688	686	183

ANNEX B

MEDICINE1. SIGNIFICANT ORGANIZATIONAL ACTIVITIES:a. General Medicine:

There were 223 admissions to the General Medical Ward (Ward 8) between 1 February - 22 April 1967, which projects to a total of approximately 250 for the entire reporting period. This is an admission rate of approximately 3 patients per day and is essentially the same as the last reporting period. Following are listed the discharge or transfer diagnoses made during this period. In a few instances there have been more than one diagnosis per patient.

<u>Diagnosis</u>	<u>No. of Patients</u>
1. Nephro or ureterolithiasis	28
2. Pneumonia	17
a) Pneumococcal	(4)
b) Undiagnosed	(13)
3. Medical Observation for abdominal pain no diagnosis established.	13
4. Essential Hypertension	12
5. Acute Gastritis, Etiology undetermined	11
6. Acute Dysentery (+ Sub acute) Etiology undetermined	11
7. Acute Myocardial Infarction	10
8. Peptic Ulcer	10
9. Chest pain, no diagnosis established	8
10. Infectious Mononucleosis	8
11. Acute pharyngitis or Tonsillitis	7
12. Hookworm	7
13. Chronic Bronchitis + Emphysema	5
14. Bronchial, Asthma	5
15. Hyperventilation Syndrome	5
16. Simple Drunkeness	5
17. FUO	4
18. Psychophysiologic GI reaction	4
19. Shigellosis	3
20. Upper Gastrointestinal bleeding, source could not be established.	3
21. Gout	4
22. Lymphogranuloma Venereum	3
23. Arthritis, no diagnosis established	2
24. Hemoptysis, source could not be established	2
25. Urinary Tract Infection	2

<u>Diagnosis</u>	<u>No. of Patients</u>
26. Rheumatoid Arthritis	2
27. Epididymitis	2
28. Bleeding Diathesis, suspected, not proved (evacuated)	2
29. Cerebral Concussion	2
30. Prostatitis	2
31. Acute Pancreatitis	3
32. Proteinuria, Undiagnosed	1
33. Epilepsy	1
34. Serum sickness (tetanus antiserum)	1
35. Urticaria, undiagnosed	1
36. Observation for renal disease, none found	1
37. Reflux esophagitis	1
38. Gonorrhea	2
39. Suicidal Gesture	2
40. Pelvic abscess due to ruptured appendix	1
41. Scrub Typhus	1
42. Cystic renal disease	1
43. Tension headache	1
44. Feminizing syndrome	1
45. Amoebic Hepatitis	1
46. Labrynthitis	2
47. Hemorrhagic Pericarditis acute	1
48. Hematuria, undiagnosed	1
49. Glomerulonephritis, chronic	1
50. Snake Bite (Fit Viper)	1
51. Allergy to Tetanus toxoid	1
52. Cellulitis	1
53. Stomatitis (Aphthous)	1
54. Osteoporosis, stiology unknown	1
55. Ehlers-Danlos syndrome, suspected, not proved	1
56. Methanol intoxication, suspected	1
57. Acute costochondritis	1
58. Subacute bacterial Endocarditis (<i>Vibrio fetus</i>).	1
59. Heat Exhaustion	1
60. Arteriosclerotic heart disease	1
61. Acute Cervical Myositis	1
62. Pulmonary Emphysema, bullous	1
63. Pulmonary abscess left upper lobe	1
64. Polysytemia, cause undetermined	1
65. Febrile Reaction to Plague Immunization	1
66. Medical Observation for lymphadenopathy no disease found	1
67. Anaphylactic reaction to Penicillin	1
68. Hyperdynamic cardiac syndrome	1
69. Cerebral Embolism	2

There were many very interesting medical problems on the General Medical Ward. Just a few of them are reported below in a little more detail:

(1). Snake Bite:

A 21 year old white male was bitten by a Malayan Pit Viper on the PIP joint of the left third finger. In spite of cold packs, swelling began immediately and proceeded to eventually spread half way up the forearm. Pain was intense. In the ER, he was given 8 cc of Bangkok Red Crcss Pit Viper antivenin (1-2 cc locally and the remainder IM). Except for low-grade fever, the patient remained free of systemic symptoms until he developed serum sickness from the antivenin.

Locally, as the edema subsided, bulla formation began on the bitten finger within 24 hours. This was debrided at approximately 72 hours and a strip of necrosis was manifest along the volar surface of the finger to the tip from the site of the bite. Serum sickness developed on the 5th day and consisted of fever, urticaria and arthritis. It was controlled by Aspirin and antihistamines. The patient was given antibiotics, though the bullous fluid proved to be sterile. The patient was sent to Japan further management.

(2). A Vietnamese painter, 35, presented with rheumatic bivalvular heart disease, and fever, was found to have Vibrio fetus in his blood and was treated with Penicillin, Streptomycin and Erythromycin for 6 weeks, and apparently has been cured. On therapy, the serum was cidal for the organism at a 1/16 dilution. This case will be reported, as there are only 4 or 5 such cases in the literature to our knowledge.

(3). A 35 year old sergeant presented with arthritis of the left knee and both hands, fever and jaundice. There was a history of sexual exposure several months previously but there has been no dysuria nor urethral discharge, according to the patient. Joint aspiration and culture proved a clinically suspected gonococcal arthritis. Bilirubin and SGOT were elevated. Since this patient was a rather heavy drinker it was not definite whether the liver abnormality was due to alcohol or to the "toxic hepatitis" described with some cases of gonococcal arthritis. Though it was possible that this was an infection with *Neisseria meningitidis*, biochemical studies in the laboratory definitely identified *N. gonorrhoeae*.

(4). A nineteen year old security guard presented with the acute onset of LUQ pain, without vomiting or diarrhea, and without fever. Physical exam revealed left CUA tenderness and left upper quadrant tenderness. No organs or masses were palpable. He became nauseated and was kept NOP, treated with IV fluids, and became progressively worse over the next few days, fever to 101, WBC to 14,000, and mild peritoneal signs in the abdomen with ileus. IV and Barium enema were negative. On his sixth day he developed a left pleural effusion as he began to feel better. The amylase determination was 309, which made the diagnosis of acute pancreatitis probably involving the tail of the pancreas likely.

He became asymptomatic over the next several days and a gall Bladder X-Ray was Neg. There was no history of excessive alcohol intake ~~so~~ there was r. evident predisposing factor. He returned to duty.

b. Infectious Disease Service

Between 1 February and 26 April 1967, 294 patients were admitted to the Infectious Disease Ward (Ward 6). A breakdown of the diagnosis at the time of discharge or transfer were as follows:

<u>Diagnosis</u>	<u>No. of Patients</u>
1. Gastroenteritis (etiology not determined)	57
2. Bacillary dysentery	48
3. Infectious hepatitis	52
4. FUO	29
5. Pneumonia	16
6. Malaria falciparum	16
7. Malaria vivax	10
8. Infectious mononucleosis	13
9. Bronchitis	7
10. Pharyngitis	4
11. T.B.	4
12. Amebic liver abscess	4
13. Rubella	3
14. Abdominal pain (etiology not determined)	3
15. Cellulitis	3
16. Scrub typhus	2
17. G-6-P-D deficiency	2
18. Grand mal epilepsy	2
19. Gonorrhea	2
20. Appendicitis	1
21. Varicella	1
22. Splenomegaly (cause unknown)	1
23. Reiters syndrome	1
24. Salmonella	1
25. Multiple fecal abscesses	1
26. Lymphogranuloma venereum	1
27. Menorrhagia (no facilities for women patient elsewhere)	1
28. URI (viral)	1
29. Hyperbilirubinemia, (cause unknown)	1
30. Drug reaction	1
31. Anemia ? etiology	1
32. Trichurus trichiura	1
33. Migraine headache	1
34. Costochondritis	1
35. Lymphoma	1
36.	

Following are brief reports of interesting cases seen on the Infectious Disease Ward.

- (1) A 30 year old Philippine Mechanic was admitted 28 March complaining of hemoptysis 1 day. He had been treated for pulmonary tuberculosis at age 17, was otherwise well except for mild fatigue for one month prior to admission.

On physical examination he was apprehensive but well nourished afebrile, not dysneic and in no distress. There was dullness and decrease breath sounds throughout the entire left chest and fine and medium rales throughout both lung fields. Cardiac dullness was shifted to the left, the PMI was in the AAL and P2 was palpable 7 cm left of the sternum.

Chest X-ray showed bilateral apical thickening nearly complete obliteration of the left lung and cavitary lesions throughout the left lung and right apex. The initial sputum specimen showed acid fast bacilli.

The patient was treated with INH and PAS. The initial heavy hemoptysis, estimated at 1 pint, subsided shortly after admission. However on the 3rd hospital day he coughed up 3 emesis basins of blood and required a 5 unit transfusion. He again stabilized but on the 5th hospital day the patient suddenly coughed up approximately 1 liter of bright red blood in 10 or 15 minutes, became apneic and expired with nasal and oral passages filled with blood. Death was attributed to exsanguination and asphyxiation secondary to erosion of a major vessel by active tuberculosis.

(2). During this quarter there were 4 cases of hepatic amoebic abscesses. The following is a typical case.

On March 27 a heavy equipment operator was admitted, complaining of daily fever and occasional chills for 2 weeks.

On physical examination temperature was 101.4, pulse 120. The abdominal exam was normal, the liver not palpable and non tender.

Laboratory data showed Hct 50, WBC 8,000 with a normal differential; SGOT 110, bilirubin 0.7 alkaline phosphatase 3, BSP 24% retention; stool analysis for O and P was negative x 5, chest X-ray normal.

The patient was noted to have slight punch tenderness over the liver on the 3d hospital day. He was started on Tetracycline empirically the third day but continued to spike daily temperatures to 101-102 for 9 days. On the 9th day, with definite liver tenderness and the abnormal liver function tests, amoebic hepatic abscess was suspected and he was given a therapeutic trial with emetine and chloroquine. His temperature started coming down immediately and with in 4 days he was afebrile. Liver tenderness subsided and liver function tests gradually returned to normal over the next 2 weeks. He was discharged to light duty after 3 weeks of therapy.

As with our other patients with presumptive amoebic hepatic abscesses there was no history or evidence of amoebic colitis.

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(3). One day after arriving back in RVN from R & R in Tokyo, a 36 year old CW3 became febrile, nauseated, chilly, anoractic and experienced difficulty urinating and a severe, throbbing, frontal headache. These symptoms worsened and on the 3rd day of illness he was admitted to the 3rd Field Hospital with 104° temperature and tenderness in the left sciatic notch. Neck rigidity developed and on the 4th day of illness an examination of spinal fluid revealed laboratory values compatible with aseptic meningitis. Early in hospitalization the patient became entirely unable to void urine and eventually required an indwelling, catheter. This fact seemed incompatible with aseptic meningitis alone, but otherwise the results of neurologic examination were normal. Mentation appeared normal. With time, however, there developed a slowing of thought progression, a bilateral intention tremor and a weakness of right hand grip. A second spinal fluid examination revealed no essential change (culture remained negative) and the patients condition finally returned to normal with only symptomatic treatment. Acute and convalescent phase sera were drawn. It is possible that this was Japanese B encephalitis.

(4). Rabies Control Board:

The Rabies Control Board evaluated 11 cases during the reporting period. Biting animals were as follows: Dog 5, Monkey 1, Unknown 4 (3 were presumably rodent bites while the victims were sleeping). There was one instance of autopsy exposure, when a technician at the 9th Med Lab cut his finger accidentally while sawing the skull of a know rabid dog. Four patients received only local wound treatment, the rest received a course of duck embryo rabies vaccine. Two patients received anti-rabies horse serum.

There is reason to believe there are more bits cases in the area than come to the attention of the Rabies Control Board.

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ANNEX C

RENAL UNIT

1. PERSONNEL:

It is noteworthy that during this busy quarter an almost complete turnover has occurred in nursing and enlisted personnel assigned to the unit. There are currently 3 nurses (all new) and 6 enlisted men (4 of 6 new) comprising the technical and nursing staff, and they are working full time in the unit. Despite this last change over, dialysis techniques and medical problems unique to renal failure patients have been quickly learned. It is a credit to those dedicated people that excellence of patient care has been maintained throughout the transition period.

2. PATIENTS:

a. The renal team has been quite active in the treatment of patients with acute renal failure (ARF) during the past quarter. 14 patients with ARF were admitted to the renal unit over a 2 month period from 25 February to 25 April 67. Renal failure was associated with traumatic war wounds in 10 patients, medical illnesses in 2 patients, methanol poisoning in 1 patient, and thermal burns in 1 patient. 11 patients were dialyzed one or more times; 3 patients not dialyzed were extremely ill with extensive wounds, and there was failure to maintain adequate systemic blood pressure in 2 patients, and convulsion and death occurred within 15 minutes of reaching the renal unit in a 3d patient.

b. In terms of dialysis procedures Table I shows the number of patients dialyzed, number of procedures, and total hours of peritoneal dialysis and hemodialysis for the past 2 months as compared with previous 6 months experience of the current renal team.

c. As represented graphically there has been a marked increase in patients requiring hemodialysis, and this contributes most significantly to the present activity of the unit involving management of seriously ill patients, technical work and nursing care problems faced with these patients.

d. Table II lists the 14 renal failure patients cared for during this last quarter, brief diagnosis, and remarks regarding treatment and prognosis.

3. COMMENTS ON THE CASES:

a. The rapidly deteriorating clinical course of case No. 1c (H.L.) was out of proportion to the degree of burns received, and appeared to be an intoxication of some sort. Complete anuria, the peculiar relative ECFV depletion, shock and upper G.I. bleeding cannot be explained on the basis of

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a 10%, 2d degree thermal burn. The only intoxicant that can be incriminated in this case is copper sulfate, as a 5% solution was applied initially to the burns because phosphorus was thought to be involved in producing the burn. It was later discovered that the patient was burned with a starcluster flare which contains no elemental phosphorus. It is unknown, of course, if the CuSO₄ solution was actually a 5% solution or mistakenly more concentrated. In January, 1967, another case was referred to the renal unit, a 20% phosphorus burn, treated initially also with CuSO₄, and ending fatally over a 4 day period. There were manifestations of acute copper toxicity with liver failure (jaundice, SGOT = 1280), hemolytic anemia, oliguria, hemorrhagic diathesis and shock. Because the burn was caused by phosphorus, copper cannot be incriminate solely in this case. In both cases, tissue specimens obtained at postmortem of heart, lung, spleen, kidney, g.i. mucosa and brain have been submitted to AFIP, Washington D.C. for copper and elemental phosphorus analysis. Blood has also been submitted for quantitation of copper, phosphorus, methemoglobin, methemalbumin and ceruloplasmin. Until tissue evidence is obtained to the contrary, perhaps copper sulfate should be removed from the treatment armamentarium of phosphorus burns.

b. Because of possible contribution to the development of ARF in case No. 8 (R.J.) and 13 (M.C.), and an uncontroled direct relationship to both renal failure and neurosensory hearing loss in case No. 14 (D.V.) physicians should review constantly dosages of nephrotoxic antibiotic drugs in normal and compromised renal function states.

T A B L E I

HEMODIALYSIS:

<u>PERIOD</u>	<u>PATIENTS</u>	<u>NO. DIALYSES</u>	<u>TOTAL HOURS DIALYSIS</u>
25 Feb - 25 April 67	8	37	259
Aug 66 - Feb 67	3	14	87
Totals:	11	51	346

PERITONEAL DIALYSIS:

<u>PERIOD</u>	<u>PATIENTS</u>	<u>NO. DIALYSES</u>	<u>TOTAL HOURS DIALYSIS</u>
25 Feb - 25 April 67	4	6	253
Aug 66 - Feb 67	8	13	505
		19	758

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T A B L E II

PATIENT	ADN.	DATE	DIAGNOSIS	REMARKS
#1. H.D 35 y.old Viet.Civ.		25 Feb 67	GSW thru Lt. Axilla, chest, diaphragm, Spleen (splenectomy), Lt. Kidney (nephrectomy) and retroperitoneal hemorrhage with subsequent ARF. Paraparesis (old trauma), large sacral and iliac decubiti.	Pt. received 11 hemodialyses during a 5 week period of oliguria with sub- sequent recovery. Patient undergoing physical Rx for paraparesis and decu- bitus care.
#2. N.V.D 25 y.old Viet.Soldier		26 Feb 67	GSW thru Lt. chest, diaphragm with lacerated spleen (splenectomy), Stomach & small bowel with subsequent ARF. Cardiac arrest shortly after arrival 3d Field Hospital.	Although resuscitated, patient not dialyzed because of persistent shock, coma and abdominal bleeding. Died 24 hrs. after admission.
#3. W.J. 30 y.old G.I.		5 Mar 67	Self inflicted grenade injury. Below knee amputation bilat. Multiple fragment wounds. Probable transfusion reaction with renal failure (ABC) incomp.)	10 hemodialyses over 28 day period with beginning early recovery phase of renal failure. However, continued wound infection (Rt. leg stump, LIL pneumonia and bacterial endocarditis with cardiac failure (aortic incomp.) eventuated in death.
#4. R.B. 19 y.old G.I.		22 Mar 67	Blast injury; massive soft tissue destruction of buttocks, lower extre- mities; fragment wounds of abdomen ARF from above and probable hemodynamic transfusion reaction (ABO incomp.)	Coma, shock, respiratory insufficiency and continued coagulation from all wounds precluded dialysis attempts. Died 6 hrs after admission.
#5. S.M. 19 y.old G.I.		23 Mar 67	GSW Lt. arm, shattered humerus bra- chial vein laceration. ARF from hemolytic transfusion reaction (rH incomp: and ? minor group incomp.)	Three (3) periodic, peritoneal dialyses over 15 days of oliguric renal failure. During this time, primary wound closed and skin grafted with good healing. Evac. to Walter Reed for convalescence and further care of arm.

TABLE II (continued)

PATIENT	ADM. DATE	DIAGNOSIS	REMARKS
#6. F.M. 23 y.old G.I.	26 Mar 67	Multiple intrabdominal and extremity fragment wounds with small and large bowel lacerations, gastrointestinal bleeding and peritonitis; avulsion left	Three (3) hemodialyses performed over 7 day period; patient died of peritonitis and septicemia (Hafnia cultured from blood).
#7. D.J. 30 y.old Merchant Seaman	1 Apr 67	Methanol intoxication. Acidosis, shock and coma.	Peritoneal dialysis x 27 hours, hemodialysis x 18 hours, without patient recovering. Blood methanol, predialysis: 130 mg%, postdialysis: 2.0 mg%.
#8. R.J. 29 y.old G.I.	2 Apr 67	GSW Lt. chest, diaphragm, spleen (splenectomy), Lt. renal artery transected (nephrectomy); stomach confusion; transverse colon lacerated; missile ended in abd. sorta. Lt. subphrenic abscess (Aerobacter) with pleural effusion 9 days postop; wound dehiscence 12 days 13 days post op. contributed by nephro-toxic drugs (colistimethate)	Patient remains oliguric (less than 150 cc) for 25 days receiving 9 hemodialysis to control renal failure. Empyemic cavity, Lt. chest, drained and healing; colostomy functioning; (2) episodes arterial bleeding from left flank wound (left renal artery stump, small vessels).
#9. H.J. 20 y.old G.I.	7 Apr 67	Dart projectile wound ("bee-hive round") of aorta (dart removed sup. mesenteric a. level), false aneurysm right renal art. with nephrectomy. Continued bleeding, jaundice, coma and renal failure.	Hemodialysis for 9 hours; discontinued because of continued hypotension and reduced blood flow thru the twin-coil. Patient died 12 hours after admission.
#10. H.J. 19 y.old G.I.	9 Apr 67	Body burns from flare grenade of hands and right thigh (less than 10%, 2d degree)? acute copper toxicity with renal failure (anuria), relative extracellular fluid vol. depletion and hemorrhagic diathesis.	Pt. died 19 hours after burn with rapidly deteriorating course of shock and coma far out of proportion to degree of burn. Acute copper toxicity postulated as initial Rx of burn included copper sulfate as phosphorus burn was suspected at first. Peritoneal dialysis performed during 3 hrs of hosp. renal unit.

TABLE II (continued)

PATIENT	ADM. DATE	DIAGNOSIS	REMARKS
#11. V.V.T. 35 y.old Viet. Civ.	12 Apr 67	BLat., obstructing renal calculi filling collecting systems both kidneys. Chronic renal failure with uremia.	Hemodialysis performed to prepare patient for surgical intervention of massive renal calculi.
#12. B.M. 19 y.old	16 Apr 67	Traumatic amput. left leg; open fracture right femur; blast damage right arm (radial art.); multiple small intestinal and large bowel perforations; lacerated liver; anuric.	Convulsions and death 15 minutes after patient admitted to renal unit.
#13. M.C. 21 y.old G.I.	20 Apr 67	GSW with small and large bowel perforations; large open defect sacrococcygeal region; acute hepatic insufficiency due to massive sepsis and multiple intraabdominal abscesses. ARF becoming manifest 16 days after wounding.	At present, two (2) hemodialysis for control of ARF: exploration 2d hospital day here with drainage multiple abscesses, further colon resection and colostomy revision (devitalized); devitalized iliopsoas necrosis; pelvic abscess drained. Sump drains placed in right and left gutters and pelvis.
#14. D.V. 19 y.old G.I.	20 Apr 67	Diffuse, nodular right lung field pneumonia. Suspected melioidosis. Subsequent extremity paresthesias, ototoxicity and ARF due to kanamycin and colistemethate toxicity.	Two (2) periodic peritoneal dialyses for managing ARF: pneumonia resolving.

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AVCA MB-GD-PO (4 May 67) 1st Ind
SUBJECT: Operational Report - Lessons Learned for Quarterly Period Ending
30 April 1967 (RCS CSFOR - 65) (3d Field Hospital)

HEADQUARTERS, 68TH MEDICAL GROUP, APO 96491

15 May 1967

THRU: Commanding Officer, 44th Medical Brigade, APO 96307

TO: Assistant Chief of Staff for Force Development, Department of the Army,
Washington, D.C. 20310

Reference Part II, Section II

1. Paragraph A. Each patient is closely screened by a medical corps officer prior to movement to the casualty staging facility. The general stability of any patient is subject to rapid change whether before movement, during movement or when destination facility is reached. Patients are not designated as stable for movement when the condition is subject to probable changes which would exceed the normal parameters deemed advisable under existing circumstances. Actually, the close observation of each patient by the professional personnel of the casualty staging facility is to be complemented. Neither the releasing nor gaining physician desires a patient to travel when medically contraindicated. The assistance provided by the 3d Field Hospital is necessary to insure the wellbeing of the patient.

2. Paragraph B. Concur.

3. Paragraph C. The ultimate goal of the MEDCAP program is attained through practical application of medical knowledge on an individual basis and through a controlled teaching environment. The choice of actions is solely dependent on the needs of the area concerned, availability of personnel and facilities, and the total program requirements.

4. Paragraph D. Every attempt is made to transport personal effects with the patients. However, the tactical situation, proximate cause of injury and the probable size of the denture are contributing factors in the loss of prosthetic appliances.

5. Paragraph E. The policy of moving burn patients out-of-country has not been disputed by the consultants concerned. The availability of a ~~real~~ ^{real} ~~Wright~~ Wright machine at the 3d Field Hospital is considered each time a request for movement of a severe burn case is submitted to higher headquarters for approval. Each severely burned patient, when determined to require definitive medical assistance is accompanied by a medical corps officer, which in itself creates a burden on the remaining professional staff. Until such time as the evacuation policy is revised, burn patients will continue to be evacuated out-of-country when requested by the attending physician and approved by competent authority.

6. Paragraph F. Disposable paper blankets are available through normal supply channels under FSN 7210-715-7895.

AVCA MB-GD.PO (4 May 67)

15 May 1967

SUBJECT: Operational Report - Lessons Learned for Quarterly Period Ending
30 April 1967 (RCS CSFOR - 65) (3d Field Hospital)

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7. Paragraph G. Concur.

TEL: Long Binh 3326

1 Incl
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Charles C. Pixley
CHARLES C. PIXLEY
Colonel, Medical Corps
Commanding

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AVCA-MB-PO (4 May 67) 2nd Ind
SUBJECT: Operational Report - Lessons Learned for Quarterly Period
Ending 30 April 1967 (RCS CSFOR-65) (3d Field Hospital)

HEADQUARTERS, 44TH MEDICAL BRIGADE, APO 96307 1 July 1967

TO: Commanding General, 1st Logistical Command, ATTN: AVCA-GO-O
APO 96307

1. The contents of the basic document and 1st Indorsement have been reviewed.

2. This report is forwarded with comments pertaining to Section II, Part II, as follows:

a. Air Evacuation: Concur. The number of patients who are determined not stable for air evacuation are few in number. Constant monitoring of patient stability elevates the level of medical care. The USARV Surgical Consultant and the Deputy Commander of the 44th Medical Brigade do inform and counsel the facility that evacuate patients prematurely. The 3rd Field Hospital is providing a valuable service in stabilizing that occasional patient removed from the evacuation chain in the III and IV corps area.

b. Wounds: Concur. These principles are outlined in the NATO handbook on Emergency War Surgery. It has been the recommendation of the surgical consultant that these principles of debridement be followed, and it has been directed that these recommendations be accepted and followed.

c. MEDCAP: Concur.

d. Prosthetics: Concur.

e. Burn Patients: Concur.

f. Air Evacuation Blankets: Nonconcur. There has never been a shortage of blankets in the medical depot system within RVN. The disposable blankets are not an item of medical supply and are not intended for use in patient evacuation. Utilization solely of disposable blankets for patient evacuation, even if available in adequate quantities, would be much more costly than utilization of the issue wool blanket.

g. Patients Calling Home: Concur. Communications facilities are heavily taxed and emergency status must be reserved for those who are seriously ill or injured so as not to degrade this category of communication.

TEL: Lynx 382

1 Incl
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F. W. TIMMERMAN
COL, MC
Commanding

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AVCA GO-O (8 May 67)

3d Ind

SUBJECT: Operational Report for Quarterly Period Ending 30 April 1967
(RCS JSFOR 65)

HEADQUARTERS, 1ST LOGISTICAL COMMAND, APO 96307

7 JUL 1967

TO: Deputy Commanding General, US Army Vietnam, ATTN: AVHGS-DH, APO 96307

1. The Operational Report - Lessons Learned submitted by the 3d Field Hospital for the quarterly period ending 30 April 1967 is forwarded.

2. The 3d Field Hospital engaged in combat service support for 89 days during the reporting period.

3. Concur with the basic report as modified by indorsements. The report is considered adequate.

FOR THE COMMANDER:

Timothy S O'Hara
TIMOTHY S. O'HARA
1st, INF
Acting Asst AG

1 Incl
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AVHGC-DST (8 May 67) 4th Ind
Subject: Operational Report-Lessons Learned for the Period Ending
30 April 1967 (RCS CSFOR-65) (U)

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96375 2 - JUL 1967

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-OT,
APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the period ending 30 April 1967 from Headquarters, 3d Field Hospital as indorsed.

2. Pertinent comments follow:

a. Reference item concerning burn patients, page 10; paragraph 5, 1st Indorsement: The Burn Section of the Surgical Research Unit (SRU), Brooke Army Medical Center, has guided in the formulation of the present policy for the initial treatment and evacuation of severely burned patients. USARV hospitals have the capability for providing the initial care prior to evacuation. Beyond the first 48 hours, many complications may develop which are best treated in centers which have the experience and equipment necessary for managing and/or avoiding these serious complications. Therefore, patients are evacuated to Japan within 48 hours of injury whenever other associated injuries permit.

b. Reference item concerning MEDCAP, page 10, and paragraph 3, 1st Indorsement: Medical officers should provide the supervision of the MEDCAP Program and insure it is coordinated with the desires of the Provincial Medicine Chief.

(1) Doctors desiring to teach in the Vietnamese Medical School have to be approved by a Vietnamese medical board and be available to teach on a scheduled basis.

(2) Doctors may practice at Vietnamese hospitals or teach Vietnamese nurses and assistants. Information may be obtained by interested personnel from COL W.H. Moncrief, Jr., Deputy Assistant Director for Public Health/Operations, Training and Special Projects, USAID.

(3) There is no recommended action to higher headquarters.

c. Reference item concerning paper blankets, Section II, Part I, paragraph F, page 7; Section II, Part II, paragraph F, page 10; paragraph 6, 1st Indorsement and paragraph 2f, 2d Indorsement: Non-concur in unit observation and recommendation. Concur with 2d Indorsement comments.

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AVHGC-DST (8 May 67)

4th Ind

Subject: Operational ...ort-Lessons Learned for the Period Ending
30 April 1967 (RCS CSFOR-65) (U)

Investigation of disposable blanket listed in 1st Indorsement reveals that this item is flammable. Since patients are allowed to smoke during evacuation flights the use of disposable paper blankets would present a serious fire hazard.

FOR THE COMMANDER

2 Incl
nc

O E. J. Martin
C. B. ST. MARTIN
Capt. ADC
Asst AG

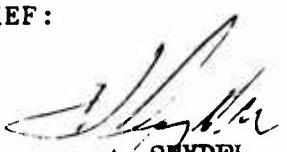
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GPOP-DT (8 May 67) 5th Ind
SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967
from Hq, 3d Fld Hosp (RCS CSFOR-65)

HQ, US ARMY, PACIFIC, APO San Francisco 96558 1 3 SEP 1967

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters has reviewed subject report and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:



a. SNYDER
CPT, AGO
Asst AG

2 Incl
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